In the claims:

1-89. (Canceled)

90. (New) A flexible waveguide capable of propagating and emitting light, comprising a flexible material having a surface and an end, wherein a first portion of the light is emitted through at least a portion of said surface of the flexible waveguide, and a second portion of the light is emitted through said end.

91. (New) The waveguide of claim 90, wherein said flexible material is elastic.

92. (New) The waveguide of claim 91, wherein said flexible material is characterized by an elasticity of at least 100 %.

93. (New) The waveguide of claim 91, wherein said flexible material is characterized by tensile set value of less than about 5 %.

94. (New) The waveguide of claim 92, wherein said flexible material is transparent.

95. (New) The waveguide of claim 90, wherein said flexible material comprises a polymeric material.

96. (New) The waveguide of claim 95, wherein said polymeric material comprises a rubbery material.

97. (New) The waveguide of claim 95, wherein said flexible material has a predetermined level of cross-linking.

98. (New) The waveguide of claim 97, wherein said cross-linking is physical cross-linking.

99. (New) The waveguide of claim 97, wherein said cross-linking is chemical cross-linking.

100. (New) The waveguide of claim 97, wherein said cross-linking is a combination of physical cross-linking and chemical cross-linking.

101. (New) The waveguide of claim 90, wherein said flexible material comprises a dielectric material, and further wherein a reflection coefficient of said dielectric material is selected so as to allow propagation of polarized light through the waveguide, and emission of said polarized light through said surface of the waveguide.

102. (New) The waveguide of claim 90, wherein said flexible material is a multilayered material.

103. (New) The waveguide of claim 90, wherein said flexible material comprises a first layer having a first refractive index, and a second layer being in contact with said first layer and having a second refractive index being larger that said first refractive index.

104. (New) The waveguide of claim 103, wherein at least one of: a thickness of said first layer, a thickness of said second layer, said first refractive index and said second refractive index, is selected so that the light propagates at a predetermined propagation angle.

105. (New) The waveguide of claim 103, wherein said propagation angle is from about 5 degrees to about 30 degrees.

106. (New) The waveguide of claim 103, wherein said second layer comprises polyisoprene.

107. (New) The waveguide of claim 103, wherein said flexible material further comprises a third layer for being in contact with said second layer and having a third refractive index being smaller than said second refractive index.

108. (New) The waveguide of claim 103, wherein said at least a portion of said surface comprises a predetermined pattern.

109. (New) The waveguide of claim 103, wherein at least one of said first and said second layers comprises at least one additional component designed and configured so as to allow said emission of the light through said at least a portion of said surface and capable of producing different optical responses to different wavelengths of the light.

110. (New) The waveguide of claim 109, wherein said different optical responses comprises different emission angles or different emission wavelengths.

111. (New) The waveguide of claim 107, wherein said third layer comprises at least one additional component designed and configured so as to allow said emission of the light through said at least a portion of said surface.

112. (New) The waveguide of claim 110, wherein said at least one additional component comprises at least one impurity, present in said second layer and being capable of emitting said first portion of the light through said at least a portion of said surface.

113. (New) The waveguide of claim 112, wherein said at least one impurity comprises a plurality of particles capable of scattering said first portion of the light to thereby emit said first portion through said at least a portion of said surface.

114. (New) The waveguide of claim 110, wherein said at least one additional component comprises at least one diffractive optical element, said at least one diffractive optical element being for diffracting said first portion of the light to thereby emit said first portion through said at least a portion of said surface.

115. (New) The waveguide of claim 114, wherein said at least one diffractive optical element is selected from the group consisting of a non-smooth surface of said second layer, a mini-prism and a diffraction grating.

116. (New) The waveguide of claim 114, wherein a location of said at least one diffractive optical element is selected such that said first portion of said light is emitted from a predetermined region of said surface area.

117. (New) The waveguide of claim 116, wherein said predetermined region of said surface area comprises a predetermined pattern.

118. (New) The waveguide of claim 115, wherein said at least one diffractive optical element is designed and constructed to selectively diffract a predetermined range of wavelengths of the light.

119. (New) The waveguide of claim 110, wherein said at least one additional component comprises at least one region of high refractive index, present in said first layer and/or in said third layer, said high refractive index being selected such that said portion of said light is emitted through said at least a portion of said surface.

120. (New) The waveguide of claim 119, wherein a location of at least one region of said high refractive index is selected such that said first portion of said light is emitted from a predetermined pattern of said surface area.

121. (New) A flexible waveguide capable of propagating and emitting light, comprising a flexible material having a surface and an end, the flexible waveguide comprising at least one impurity capable of scattering a first portion of the light so that said first portion of the light is emitted through at least a portion of said surface of the flexible waveguide, while a second portion of the light is emitted through said end.

122. (New) A flexible optical device, comprising:

(a) an optical coupler; and

(b) a flexible material having a surface and an end, said flexible material being characterized by a numerical aperture;

wherein said optical coupler is capable of focusing light to impinge on said flexible material at an impinging angle satisfying said numerical aperture, and said

flexible material is characterized in that a first portion of said light is emitted through at least a portion of said surface, and a second portion of said light is emitted through said end.

123. (New) A method of providing illumination, the method comprising:

providing a flexible material having a surface and an end;

propagating light through said flexible material;

emitting a first portion of said light through at least a portion of said surface; and

emitting a second portion of said light through said end.

124. (New) The method of claim 123, wherein said emission of said first portion of the light is by at least one impurity, present in said flexible material and being capable of emitting said first portion of the light through said at least a portion of said surface.